RESEARCH PROPOSALS

January 26, 2006

California Environmental Protection Agency

Air Resources Board

Differences in Inflammatory Responses to Exposures of Concentrated Ambient Particles in Susceptible Volunteers

University of California, Los Angeles
Professor David Diaz-Sanchez
$629,920 (36 months)

Objective: Determine how short-term exposure to ambient PM alters inflammation and airway and cardiovascular function in humans.

Expected Results: Measures of lung function, inflammatory respiratory responses, and heart rate variability as a result of controlled short-term ambient PM exposures.

On-Road Measurement of Light-Duty Gasoline and Heavy-Duty Diesel Vehicle Emissions

University of California, Berkeley
Professor Robert Harley
$288,463 (21 months)

Objective: Characterize fleet-averaged rates of pollutant emissions from light and heavy-duty vehicles.

Expected Results: Effects on real world emission rates from changes in fuel specs, vehicle technology, emission control, and fleet characteristics.

Process-Based Farm Emission Model for Estimating Volatile Organic Compound Emissions from California Dairies

University of California, Davis
Professor Ruihong Zhang
$299,351 (24 months)

Objective: Develop models to predict VOC emissions from individual biological processes and individual sources within dairies.

Expected Results: Improved estimates of baseline VOC emissions from dairies and individual processes, and the effects of inputs to the dairy system such as feed, waste handling, or environmental factors.

Impact of Reactive Halogen Species on the Air Quality in California Coastal Areas

University of California, Los Angeles
Professor Jochen Stutz
$300,000 (36 months)

Objective: Conduct field observations of reactive halogen species and their reaction products along the coast in southern California.

Expected Results: Improved understanding of coastal halogen chemistry.

Evaluation of the Proposed European Methodology for Determination of Particle Number Emissions

University of California, Riverside
Dr. Thomas Durbin and Prof. David Cocker
$250,000 (15 months)

Objective: Conduct a critical evaluation of the European method and determine its potential in California for PM emission measurement and in-use screening.

Expected Results: Data on robustness and representativeness of the European particle number measurement method.

RESEARCH PROPOSALS

January 26, 2006

California Environmental Protection Agency

Air Resources Board